

ABSTRACT

The invention is directed to amphipathic polymeric particles that serve as both the dispersant and the binder in water based inks, ink compositions containing these particles, and methods for making the particles. The polymeric particles contain both hydrophilic and hydrophobic moieties with a pre-determined structure, and have an average diameter of 50 to 500 nm. The amphipathic polymeric particles may be prepared by a side-chain conversion method or a polymerization process involving an ATRP step, with or without a cross-linking agent. This invention improves the stability of polymer and inks by both ionic and steric stabilization of the suspended polymer particles.